

REMARKS

The Specification and Claims 12 and 15 are objected to on formal grounds. These objections have been addressed.

The Examiner stated that the drawings were never submitted. The USPTO Public Pair and Applicant's records show that Drawing Figure 1 was submitted. Nevertheless, we resubmit Figure 1 of the drawings.

Claims 10-12 are rejected under 35 U.S.C. § 112, second paragraph, as failing to distinctly claim the subject matter of the invention.

Claims 1-8, 10-11, 13-14 and 16-19 are rejected under 35 U.S.C. § 102(b) as being anticipated by *Ricketts et al US 5967860*.

Claims 9 and 11-12 are rejected under 35 U.S.C. § 103(a) as being obvious in view of *Ricketts et al*.

Claim 15 is rejected under 35 U.S.C. § 103(a) as being obvious in view of *Ricketts et al* as applied to claims 1-14 and 16-19 above, and further in view of *Koichi JP 59-153852*.

Following are articles which establish that molybdenum and tungsten in their pure form cannot be electro-deposited.

"Es gelingt nicht, Molybdän und Wolfram in reiner Form aus wäßrigen Lösungen elektrolytisch abzuscheiden; wegen der niedrigen Wasserstoffüberspannung entwickelt sich nur Wasserstoff). Es ist aber möglich, Wolfram und Molybdän zusammen mit anderen Metallen abzuscheiden" (Wagramjan, "Legierungen des Wolframs und Molybdäns mit Metallen der Eisengruppe," Handbuch der Galvanotechnik, page 551).

(English translation of above)

"It is not possible to deposit molybdenum or tungsten in their pure form by electroplating from an aqueous solution; because of the hydrogen electric potential only hydrogen would form. It is possible to deposit molybdenum and tungsten alloyed together with other metals."

"Numerous claims have been made for baths from which pure tungsten could be plated, but no practical process for plating tungsten from aqueous solution appears to have been developed. Attempts have been made to duplicate the results obtained by several claimants (2-4) but never has enough pure tungsten been obtained from any aqueous bath to permit its positive identification" (Clark and Lietzke, "The Mechanism of the Tungsten Alloy Plating Process," Journal of the Electrochemical Society, June 1952, p. 245).

So, electroplating prior art references are not obviously combined to include tungsten or molybdenum.

The Examiner takes the position that it would be obvious to develop a non-alloyed coating by combining two references neither of which contains a hint or motivation to be combined.

Ricketts is drawn only to electro-deposition of Ag-Ni-C coatings and has no possibility of being modified as imagined by the Examiner to become or accept a non-electroplated coating.

The Examiner has combined unrelated elements of two unrelated references, added features not described or suggested in either references, and determined it would be obvious to combine such references to obtain the specialized coating of the present claims. The Examiner has overstepped the bounds of what is obvious and has invented using a combination of prior art elements absent any suggestion to do so, other than the present invention disclosure itself.

The Examiner has pointed to no motivation to combine the bald recitation of tungsten and molybdenum into a coating as claimed.

Examiners are not free to dispense with the element of motivation in references to combine those references.

Certainly there is no disclosure of a coating with the presently claimed elements of a diffusion inhibiting intermediate layer.

CONCLUSION

We have paid the fee for \$440 for the extra independent claims. Please debit or credit deposit account 04-2219 for any underpayments or overpayments. Please put down our reference number of 14261.

Applicant asserts that all of the Examiner's objections have been obviated, and therefore now respectfully requests withdrawal of the objections and allowance of the application.

Respectfully submitted,

/Keith H. Orum/

Keith H. Orum
Attorney Registration No 33985
Attorney for Applicant

Orum & Roth LLC
53 West Jackson Boulevard
Chicago, Illinois 60604-3606
Telephone: 312.922.6262